

Serial No. 10/812,903
Amdt. dated January 10, 2007
Reply to Office Action of October 10, 2006

Docket No. HI-0194

REMARKS

Claims 10, 11, 13-15, and 21-31 are pending. Claims 10, 11, 13, and 15 have been amended, claims 1-9, 12, and 16-20 have been canceled, and new claims 21-31 have been added to recite additional features of the embodiments disclosed in the specification

Reconsideration of the application is respectfully requested for the following reasons.

In the Office Action, claims 10, 11, and 13-15 were rejected under 35 USC § 103(a) for being obvious in view of the Kawamura patent. This rejection is traversed for the following reasons.

The Kawamura patent shows that, at the time the claimed invention was made, it was known to place a conductive antistatic layer 2 and an anti-reflective layer 6 in tandem over the screen of a cathode ray tube. Kawamura further discloses that the antistatic layer may be formed from a metal-oxide.

Notwithstanding these disclosures, Kawamura does not teach or suggest that it was known to incorporate a conductive power into the front filter of a plasma display panel to serve as an electromagnetic interference (EMI) shield. Moreover, while the Examiner has relied on the related-art disclosed in Applicants' specification to show that it was known to form a front filter of a PDP with at least two optical filter films, neither the related-art nor the Kawamura patent teaches or suggests that it was known to modify a front filter of a PDP to include an EMI shield

formed from a conductive powder. These distinguishing features are recited in amended claim 10.

Specifically, claim 10 recites in its preamble “a front filter for a plasma display apparatus” and “at least two optical filter films coupled over a surface of a plasma display panel.” The Kawamura patent does not teach or suggest these features. Rather, its disclosure is limited solely to CRT-type displays.

Claim 10 further recites an adhesive layer for adhering the at least two optical filter films to each other, where the adhesive layer includes “a conductive power to shield electromagnetic waves.” Kawamura does not teach or suggest forming an EMI shield in a front filter of a PDP from a conductive powder. Rather, the Kawamura patent is limited only to CRT displays, and the related-art disclosures in Applicants’ specification show mesh-type EMI shields. Moreover, layer 2 of the Kawamura device is only disclosed as performing an antistatic function. This is not the same as performing EMI shielding. That is, antistatic layer 2 is disclosed to disperse static electricity caused by dust forming on its CRT screen. (See column 12, lines 59-67, and column 17, lines 42-45). The Kawamura patent does not disclose that layer 2 shields electromagnetic waves, which is a function different from merely dispersing dust-based static electricity.

Claim 10 further recites that “said conductive power decentralized in the adhesive layer to within a predetermined concentration range by volume ratio relative to an amount of adhesive agent in the adhesive layer, said predetermined concentration range set to allow the plasma

display panel to achieve a desired transmission rate.” The Kawamura patent does not teach or suggest these features, taken alone or in combination with the related-art disclosures in Applicants’ specification.

As shown in Figure 3a, the Kawamura antistatic layer 2 is formed between anti-reflective layer 6 and the CRT screen. Kawamura discloses that layer 2 is formed from a metal, e.g., SnO_2 , In_2O_3 , or Sb_2O_3 . Kawamura does not disclose that this metal is decentralized, or otherwise mixed with, an adhesive agent to within a predetermined concentration range by volume ratio in the adhesive layer as recited in claim 10. Rather, Kawamura discloses that metal layer 2 is merely applied and heated over the CRT screen. (See column 7, line 66 - column 8, line 8). Kawamura further fails to teach or suggest that the predetermined concentration range is “set to allow the plasma display panel to achieve a desired transmission rate.” The related-art disclosures in Applicants’ specification are also silent as to these features.

Absent a teaching or suggestion of these features, it is respectfully submitted that claim 10 and its dependent claims are allowable over the Kawamura patent, whether taken alone or in combination with the aforementioned related-art.

In rejecting certain dependent claims, the Examiner merely took the position that all of the features recited in these claims are merely a design choice and therefore would have been obvious. In order to properly assert that features in a claim are a matter of design choice when issuing a § 103(a) rejection, the Examiner must show: (1) the feature was known at the time the

claimed invention was made and (2) there exists some teaching or suggestion in the art that would have lead one of ordinary skill in the art to modify the primary reference (in this case, the Kawamura patent) to include the feature. (See MPEP 2144.04 and In re Chu, 36 USPQ.2d 1089, 1095 (Fed. Cir. 1995). In the present case, the Examiner has failed to make either showing.

That is, while conductive powders were surely known at the time the claimed invention was made, the Examiner has failed to cite a reference which shows that it was known to include such a conductive powder in the front filter of a plasma display panel.

Moreover, there is no teaching or suggestion in the record that would have lead one of ordinary skill in the art to modify the Kawamura patent to include the features recited in the dependent claims. And, even if such a modification were made, the claimed invention would not be formed because the Kawamura disclosure is restricted solely to a CRT monitor. Neither Kawamura, the related-art, nor any other reference of record teaches or suggests forming a PDP front filter to include the features recited in the claims depending from claim 10.

More specifically, none of the references individually or collectively teach or suggest that the predetermined concentration range of the conductive powder recited in claim 10 “is 1-40% of the adhesive agent by volume ratio” as recited in claim 11.

None of the references individually or collectively teach or suggest that the conductive powder recited in claim 10 “is formed of any one of copper (Cu), silver (Ag), gold (Au), aluminum (Al), nickel (Ni), platinum (Pt), and carbon nanotube (CNT)” as recited in claim 14.

Rather, Kawamura only discloses Sn-, In-, and Sb-based metals. None of the metals recited in claim 14 are taught or suggested in this patent.

None of the references individually or collectively teach or suggest that the conductive powder of claim 10 “has a particle size of between several nm to 380nm” as recited in claim 15.

For at least the foregoing reasons, it is respectfully submitted that the claims which depend from claim 10 are allowable.

The rejection of claim 12 has been obviated by the cancellation of this claim. Applicants further submit that the amendments to claim 13 are sufficient to obviate the rejection under 35 USC § 112, second paragraph.

New Claims 21-35 have been added to the application.

Claim 21 recites that the predetermined concentration range of the conductive powder of claim 10 “is set to allow the plasma display panel to transmit visible rays in the range above 380 nm.” (See, for example, Paragraphs [59] and [67] for support.) These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claims 25-31 are allowable for reasons similar to those which patentably distinguish claim 10 and its dependent claims from the references of record.

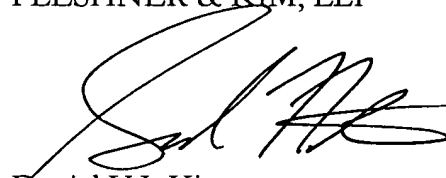
In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

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